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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,367	08/15/2003	Richard H. Schlosberg	2001B052A/2	2531

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EXAMINER
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STOCKTON, LAURA LYNNE

ART UNIT	PAPER NUMBER
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1626

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/642,367

Applicant(s)

SCHLOSBERG ET AL.

Examiner

Laura L. Stockton, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-15,17-26,28-39 and 41-58 is/are pending in the application.
- 4a) Of the above claim(s) 47 and 48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-15, 17-26, 28-39, 41-46, and 49-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

Claims 1, 2, 4-15, 17-26, 28-39 and 41-58 are pending in the application.

***Election/Restrictions***

Applicants' election with traverse of Group I, directed to a process of making (claims 1-46), in the reply filed on January 12, 2006 was acknowledged in the previous Office Action. The requirement was deemed proper and therefore made FINAL in the previous Office Action.

Claims 47 and 48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention. Applicant timely traversed the restriction (election) requirement in the reply filed on January 12, 2006.

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Rejections made in the previous Office Action that do not appear below have been overcome. Therefore, arguments pertaining to these rejections will not be addressed.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 4-15, 17-26, 28-39, 41-46 and 50-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

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application was filed, had possession of the claimed invention.

No support in the specification or the originally filed claims can be found for the amendments to claims 1, 14, 25 and 38 Amendment filed July 19, 2006.

Particularly, no support was found for the expression "and mixtures thereof". The specification fails to teach that mixtures of a carbonation catalyst can be used in the claimed process. Therefore, the claims lack written description as such.

### ***Response to Arguments***

Applicant's arguments filed July 19, 2006 have been fully considered but they are not persuasive.

Applicant argues that paragraphs (0018), (0019) and (0020), found on pages 5-6 of the instant specification, disclose preferred catalysts are the quaternary ammonium compounds. In response, the specification does disclose numerous catalysts but the

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specification, and particularly the paragraphs highlighted by Applicant, fails to disclose that the process can have more than one carbonation catalyst. Therefore, the expression "and mixtures thereof" lacks written description.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to

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overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 49 and 58 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9, 11, 23-31 and 33 of U.S. Patent No. 6,774,256. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims only one carbonation catalyst whereas the carbonation catalyst of the instant claimed invention can be one of three possibilities. One skilled in the art would thus be motivated to utilize the process of the patent, and particularly the catalyst used, to arrive at the instant claimed process with the expectation of obtaining dialkyl carbonates and diols. Therefore, the

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instant claimed process would have been suggested to one skilled in the art.

Claims 49 and 58 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 49 of copending Application No. 10/641,596. Although the conflicting claims are not identical, they are not patentably distinct from each other because each application claims the [1,1' (1-butylbenzimidazol-2-yl)pentane]copper(II) di(trifluoromethanesulfonate) catalyst in a process for making dialkyl carbonate and a diol from an alkylene oxide, carbon dioxide and an aliphatic monohydric alcohol.

One skilled in the art would thus be motivated to utilize the process of the copending application, and particularly the catalyst used, to arrive at the instant claimed process with the expectation of obtaining dialkyl carbonates and diols. Therefore, the



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instant claimed process would have been suggested to one skilled in the art.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-15, 17-26, 28-39, 41-46 and 49-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan et al. {U.S. Pat. 6,407,279} in view of the combination of teachings in Emmons et al. {U.S. Pat. 3,535,341} and McClellan {U.S. Pat. 2,873,282}.

***Determination of the scope and content of the prior art (MPEP***

***§2141.01)***

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Applicants claim a process of making dialkyl carbonate and a diol from alkylene oxide, carbon dioxide and an aliphatic monohydric alcohol comprising (a) reacting an alkylene oxide with carbon dioxide in the presence of a carbonation catalyst selected from carbonates or bicarbonates of quaternary ammonium bases to provide a crude cyclic carbonate and (b) reacting said cyclic carbonate with an aliphatic monohydric alcohol in the presence of a catalyst. Buchanan et al. (see entire reference and especially columns 1, 3-5, 7 and 9) teach a process of making dialkyl carbonate and a diol from alkylene oxide, carbon dioxide and an aliphatic monohydric alcohol.

***Ascertainment of the difference between the prior art and the claims***

***(MPEP §2141.02)***

The difference between the process of Buchanan et al. and the process instantly claimed is that Buchanan et al. generically describe the instant quaternary ammonium catalysts. However, Emmons et al. (column 1,

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lines 35-53) and McClellan (columns 1 and 2) each teach that it is known to use quaternary ammonium compounds as catalysts in processes of making alkylene carbonates (Applicants' cyclic carbonate produced in step a).

***Finding of prima facie obviousness--rational and motivation (MPEP  
§2142-2413)***

One skilled in the art would have been motivated to utilize the processes taught by the above prior art to arrive at the instant claimed process with the expectation of obtaining a dialkyl carbonate and a diol. Therefore, the instant claimed process would have been suggested to one skilled in the art.

***Response to Arguments***

Applicant's arguments filed July 19, 2006 have been fully considered but they are not persuasive.

Applicant argues that: (1) Buchanan et al. fail to disclose or suggest the catalyst recited in the instant claimed invention's step a) and step b); (2) neither Emmons et al. or McClellan teach step b) of the instant

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claimed invention; and (3) neither Buchanan et al. alone, or in view of Emmons et al. and McClellan render obvious the instant claimed invention.

All of Applicant's arguments have been considered but have not been found persuasive. Buchanan et al. teach that it is known in the art to react alkylene oxides with CO<sub>2</sub> in the presence of ammonium containing catalyst (column 2, lines 6-14). Emmons et al. (column 1, lines 35-53) and McClellan (columns 1 and 2) each teach the use of ammonium carbonates and ammonium bicarbonates as catalysts in the process of making alkylene carbonates (the instant process step a).

Applicant argues that neither Emmons et al. or McClellan teach step b) of the instant claimed invention. In response, Emmons et al. and McClellan are secondary references and as such, are not required to teach each limitation found in the claims. However, Buchanan et al. teach the instant process step b (column 7, lines 19-48). Further, Buchanan et al.

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disclose that "quaternary ammonium anion exchange resins, containing some carbonate or bicarbonate anions, are particularly effective as a transesterification catalyst for the synthesis of dimethyl carbonate and ethylene glycol in accordance with the present invention" (column 8, lines 65-67; and column 9, lines 1-3). The test for combining references is not what individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (1971). While a deficiency in a reference may overcome a rejection under 35 U.S.C. § 103, a reference is not overcome by pointing out that a reference lacks a teaching for which other references are relied. In re Lyons, 150 U.S.P.Q. 741, 746 (C.C.P.A. 1966).

Additionally, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re

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Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For all the reasons given above, the rejection is deemed proper and therefore, maintained.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed,

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and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

This application contains claims 47 and 48 drawn to an invention nonelected with traverse in the reply filed January 12, 2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

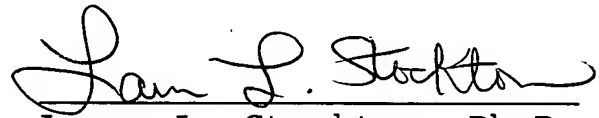
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (571) 272-0710. The examiner can normally be reached on Monday-Friday from 6:15 am to 2:45 pm. If the examiner is out of the Office, the examiner's supervisor, Joseph McKane, can be reached on (571) 272-0699.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

The Official fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

A handwritten signature in cursive script, reading "Laura L. Stockton".

Laura L. Stockton, Ph.D.

Patent Examiner

Art Unit 1626, Group 1620

Technology Center 1600

September 28, 2006